

APPENDIX N - ALS INTERFACILITY TRANSFER GUIDELINES

Introduction- ALS INTERFACILITY TRANSFER GUIDELINES

Protocol N-1- Transfer Protocol: Post-CVA with or after IV tPA (Effective March 1, 2009)

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APPENDIX N - ALS INTERFACILITY TRANSFER GUIDELINES

INTRODUCTION

Effective Date: January 8, 2009

Minimum Standards for Interfacility Transfers:

1. Staffing, Training

Minimum staffing at the Intermediate level requires one EMT-Basic and one EMT-Intermediate. Minimum staffing at the Paramedic level requires two EMT-Paramedics, except when a waiver is issued by the Department as follows:

- a. to allow Paramedic level staffing with one EMT-Paramedic and EMT-Intermediate pursuant to 105 CMR 170.305(C)(3), or
- b. to allow Paramedic level staffing with one EMT-Paramedic and one EMT-Basic pursuant to 105 CMR 170.305(C)(3)(a)(3) and in conformance with Administrative Requirement 5-255.

EMTs providing patient care during Interfacility Transfers must meet the following requirements as outlined in 105 CMR 170.000 et al:

- a. current certification as an EMT in Massachusetts;
- b. completion of Department approved supplemental training that is specific to and consistent with levels of certification of involved EMTs and includes
 - expanded roles and responsibilities
 - additional, approved treatment modalities, equipment, devices, and technologies; and
 - ambulance service policies and procedures regarding ALS Interfacility Transfers
- c. has maintained current authorization to practice pursuant to the Affiliate Hospital Medical Director's review of clinical competency

Guidelines for approved ALS Interfacility Transfer training programs have been issued separately by the Department. It shall be the responsibility of the transferring ambulance service to ensure and to verify appropriate training of its personnel providing ALS Interfacility Transfers.

2. Affiliation Agreements; Medical Control

An ambulance service must be licensed at an ALS level by the Department to provide ALS care during Interfacility Transfers, and it must maintain an affiliation agreement, in accordance with 105 CMR 170.300, with a hospital licensed by the Department for Medical Control, pursuant to 105 CMR 130.1501-130.1504 of the Hospital Licensure regulations. Such affiliation agreements must designate an Affiliate Hospital Medical Director (105 CMR 170.300(A)(2) and 105 CMR 130.1502(C)), whose medical oversight functions are defined in 105 CMR 130.1503. Standards for Affiliate Hospital Medical Directors are defined in 105 CMR 130.1504.

3. Communications:

All communications with a Medical Control physician must be recorded.

4. Scope of Practice:

Section 170.360(A) of the EMS Regulations states, "No ambulance service or agent thereof shall transport a patient between health care facilities who is receiving medical treatment that is beyond the training and certification capabilities of the EMTs staffing the ambulance unless

an additional health care professional with that capability accompanies the patient...” Depending on the individual’s condition, there may be situations in which a physician or some other specialist’s presence might be necessary; such determination shall be made by the on-line medical control physician in consultation with the physician at the sending hospital. All involved in this decision should consider whether the benefits of the transfer sufficiently outweigh the risks; a patient’s greatest benefit may result from being transported by a standard IFT crew to a higher level of hospital care rather than delay for other transport. The scope of practice for each EMT level is defined (1) in regulation (105 CMR 170.810, 170.820 and 170.840), (2) through established training programs approved by the Department, and (3) through the Statewide Treatment Protocols consistent with the Interfacility Transfer Guidelines.

The following are patient condition classifications and corresponding requirements for EMT personnel during ambulance transport:

- a. Routine, scheduled transport; Patient clearly stable for transport with no requirement for airway management, IV maintenance and/or cardiac monitoring.

Minimum Staffing: BLS licensed ambulance service; two EMT-Basics

- b. Patient clearly stable for transport (as above) who has a “maintenance” IV running without additives; (e.g., cancer patient transported for radiation therapy, with unadulterated crystalloid IV solution running).

Minimum Staffing: ALS-Intermediate licensed ambulance service; one EMT-Intermediate attending to patient care and one EMT-Basic driving

- c. Patient with an acute or sub acute problem, who is either completely or, at least, to the best of a facility’s ability, stabilized; who has the potential to become less stable during transport. Instrumentation or medication running must be consistent with the Interfacility Transfer Guidelines.

Minimum Staffing: ALS-Paramedic licensed ambulance service; two EMT-Paramedics; or, if the ambulance service has been issued the appropriate staffing waiver, one EMT-Paramedic and one EMT-Intermediate or EMT-Basic. The EMT with the highest level of certification must attend to patient care.

- d. Patient with an acute problem with high potential to become unstable; Critical care patient with any other instrumentation or medication running that is not included in the Interfacility Transfer Guidelines.

Minimum Staffing: Appropriate additional medical personnel (per 105 CMR 170.360(A)) must accompany the patient during transfer; any level of ambulance service licensure; two EMT-Basics. The ALS Interfacility Transfer Subcommittee recommends that the referring hospital consider Critical Care Transport for such a patient. In the event that CCT is unavailable, medical personnel accompanying the patient must be able to manage all equipment and instrumentation associated with the patient’s care and provide advanced resuscitative measures if needed.

- e. Critical Care Transports (see 105 CMR 170.000, for regulatory requirements regarding critical care transport).

Under no circumstances shall EMTs function or be assigned to transfers beyond, or potentially beyond, the scope of their training and level of certification. The scope of practice for all EMTs is limited to the levels of EMT certification and training and by licensure level of the ambulance service by which they are employed.

If (1) a patient's medical condition necessitates immediate transport to another health care facility and (2) the patient's medical treatment during transport will exceed the level of licensure of the transferring ambulance service and/or level of certification of the transferring ambulance's personnel, and (3) the transferring facility will not provide appropriate additional personnel pursuant to 105 CMR 170.360(A), Critical Care Transport by ground or air should be employed.

The transferring facility may at any time opt to exceed these minimum requirements by transferring patients in BLS ambulances with appropriate medical personnel as defined in 170.360(A) or by Critical Care Ground or Air Transport.

5. Quality Assurance/Quality Improvement

- a. Ambulance services providing ALS Interfacility Transfers shall be required to have quality assurance/quality improvement policies specific to ALS Interfacility Transfers in conjunction with both their affiliate hospital medical directors and their ambulance service medical directors, if any, and include at a minimum:
 - review of appropriateness of transfers, denials, and conformance with EMTALA regulations;
 - review of critical skills (e.g., intubations, cardiac arrest management, IV therapy), and other measures of system function as deemed appropriate by the Department;
 - steps for system improvement and individual remediation, available for Department review, of cases found to be deficient in critical interventions
- b. Ambulance services shall report to the Department and the Affiliate Hospital Medical Director any violations of 105 CMR 170.000, this Administrative Requirement and/or prevailing treatment protocols as they relate to ALS Interfacility Transfers.
- c. EMT skill maintenance and didactic knowledge will be continually assessed and appropriate measures taken to ensure quality of patient care by affiliate hospital medical directors and by ambulance service medical directors, if any.

Patient ALS Transfer Procedure

Once an ALS Interfacility Transfer has been deemed appropriate by the transferring ambulance service (see "Scope of Practice" above), paramedic staff, upon arrival at the transferring facility, will:

- receive a report from the staff of the transferring facility;
- assess the patient; and
- in cases where the patient's care during the transfer exceeds the standing-order scope of practice as defined by the current version of the Statewide Treatment Protocols for an EMT-Paramedic or the patient is unstable or is likely to become unstable as defined previously (see "Scope of Practice" above) will provide a concise, complete and accurate patient report to an On-Line Medical Control physician, according to the EMS service's and the Affiliate Hospital's policies and procedures. When EMTs have a concern regarding the safety of the patient being transferred, the EMT-Paramedic will contact an On-Line Medical Control physician for guidance.

The report should include, at a minimum, the following information:

- a. Names of transferring and receiving facilities;
- b. Patient's diagnosis;
- c. Reason(s) for transfer;
- d. Brief history of present illness and any intervention(s) which has occurred to date;
- e. Pertinent physical findings;

- f. Vital signs;
- g. Current medications and IV infusions;
- h. Presence of or need for additional medical personnel;
- i. Anticipated problems during transport, if any;
- j. Anticipated transport time; and
- k. Staffing configuration of the transporting ambulance

NOTE: Complete copies of all pertinent medical records, including X-Rays, CT Scans, consultative notes and ECGs, as available, must accompany the patient to the receiving facility.

When necessary, the Medical Control Physician and paramedic will discuss with the transferring physician the orders for maintenance of existing and/or addition of new therapies according to the needs of the patient, within the scope of existing treatment protocols and EMT scope of practice. The Medical Control Physician will be responsible for all actions/interventions initiated by the EMS personnel during transport unless the referring physician accompanies the patient.

If the transferring physician is unavailable, or the patient is unstable, the Medical Control Physician may recommend to the transferring facility additional therapies prior to the transfer of the patient in the interest of patient safety and quality care.

In some situations, consistent with the intent of EMTALA, the transfer of a patient not stabilized for transport may be preferable to keeping that patient at a facility incapable of providing stabilizing care. If the transferring facility cannot provide appropriate medical care or appropriately trained and experienced personnel to accompany the patient, alternative means of transfer, including Critical Care Transport, must be utilized. The use of a local Emergency Ambulance Service is strongly discouraged in such a situation. All such responses must be reported by the ambulance service to the Department's Division of Health Care Quality and the Affiliate Hospital Medical Director for review. It is primarily the responsibility of the referring physician and Medical Control Physician to determine the appropriate method of transferring an unstable patient.

When a facility sends its own staff with the patient during transfer (additional medical personnel) and the patient's condition deteriorates en route, EMS personnel must contact the Medical Control Physician for appropriate intervention orders and notify the receiving facility of the change in patient status.

If the accompanying staff is an RN s/he will maintain patient care responsibility, functioning within his/her scope of practice and under the orders of the transferring physician. The Paramedic and the RN will work collaboratively in the provision of patient care. If the patient's condition deteriorates en route, the Paramedic may assume full responsibility in conjunction with their Medical Control Physician for care that exceeds the RN's scope of practice and/or the transferring physician's medical orders. Prior to transfer with an RN, the referring physician must contact the service's Medical Control Physician and provide staffing rationale.

If the accompanying staff includes a physician from the transferring facility, that physician shall be in charge of patient care. Prior to transfer, the transferring physician accompanying the patient must contact the service's Medical Control Physician and coordinate patient care between the physician-in-charge and the paramedic practicing within the Statewide Treatment Protocols. Clear lines of command and responsibility shall be established prior to transport.

Interstate ALS Interfacility Transfers

Interstate transfers are permitted. Paramedics must obtain Medical Control through normal channels, through the Affiliation Agreement for Medical Control of the ambulance service for whom they are working. Appropriate provisions for re-contacting the Medical Control physician en route, if necessary, should be made prior to departure from the transferring facility. If a transfer originates out of state and no contact with Medical Control Physician is possible, the transfer

should be made at the BLS level only with appropriate additional personnel provided by the transferring facility.

Any of the following **Medications**, not currently part of the EMT Paramedic Statewide Treatment Protocols, may be used in the Interfacility Transfer mode, if they have been instituted by the sending facility. Unless otherwise stated, the transfer paramedics may **continue** and **monitor**, but not **institute** these medications and infusions, except as superseded by the Mass. EMS Pre-Hospital Treatment Protocols.

Interfacility Transfer Medications (in addition to required medications):

aminophylline;
antibiotics;
anti-sepsis support medications; ++
blood products;
10% Dextrose (D10);
digoxin;
antidysrhythmics, cardiac, antihypertensive, and pressor agents; ++
anticonvulsants ; ++
glycoprotein IIb / IIIa inhibitors; ++
heparin;
insulin infusions;
mannitol infusions; ++
benzodiazepines, narcotics, anesthetics, or sedatives;
paralytics;
nitroglycerin in all forms;
octreotide;
intravenous steroids; ++
standard IV infusion fluids (1/2 NS, D5 1/2 NS, D5 1/4 NS, D5, LR, etc.);
electrolyte infusions;
thrombolytic agents; ++
parenteral nutrition (PPN or TPN) (via central or peripheral IV lines);
other medications as approved by the OEMS medical director.

NOTE: Although the sending facility may have initiated medication(s), Paramedics MUST be familiar with all of the above medications that the patient may be receiving at the time of transfer. Reminder: interfacility medications are not to be initiated by Paramedics (except under special project waiver).

++ above indicates that non-STP medication of this category may be given en route as a repeated bolus or drip adjustment if already given at the sending facility, if the paramedics are trained in the use of the medication in bolus form, and if so ordered by medical control.

It is the responsibility of the service's affiliate hospital medical director to train personnel in the medications necessary to carry out IFT in their areas of responsibility.

Interfacility Equipment Monitoring allowed:

Ventilators
Central & Arterial lines
Chest Tubes and accompanying hardware
Feeding tubes
Femoral Sheath
NG Tubes
PICC Lines
Infusion pumps (including insulin infusion devices)
Bladder Irrigation
Internal Pacemakers
ICP monitors not in active use

* Based upon accepted in-service training and certification and, as above, these skills are directed at the **continuation and monitoring** of these devices, and **not** their **institution** or **initiation**, which have been accomplished at the sending facility. (Note: Intra-aortic balloon pumps are specifically **excluded**, and will require appropriately trained/certified personnel for use during Interfacility Transfer).

APPENDIX N -1 TRANSFER PROTOCOL: POST-CVA WITH OR AFTER IV TPA (EFFECTIVE MARCH 1, 2009)

The following IFT-specific protocol is to be used per medical control orders in the appropriate clinical setting, For IFT-trained ALS units only.

- ☐ Document vital signs prior to transport and verify that SBP < 180, DBP < 105. If BP above limits, sending hospital should stabilize prior to transport
- ☐ Obtain contact method for family or caregiver (preferably cell phone) to allow contact during transport or upon patient arrival
- ☐ Perform and document initial neurological exam
 1. Perform and record Stroke Scale, GCS, and pupil exam
- ☐ Continuous pulse oximetry monitoring, apply oxygen by nasal canula or mask to maintain O2 sat > 92%
- ☐ Continuous cardiac monitoring. Call medical control if hemodynamically unstable or symptoms due to tachycardia or bradycardia
- ☐ Keep strict NPO *including* medications
- ☐ Verify total dose and time of IV tPA bolus (if dose is completed prior to transfer)
- ☐ If IV tPA dose administration will continue *en route*, verify estimated time of completion. **Verify** with the sending hospital that the excess tPA has been withdrawn from the tPA bottle and wasted, so that the tPA bottle will be empty when the full dose is finished infusing. For example, if the total dose is 70 mg, then there would be an extra 30 cc that has been withdrawn and wasted since a 100 mg bottle of tPA contains 100cc of fluid when reconstituted. In addition, the sending hospital should apply a label to the bottle with the number of cc's of fluid that should be in the bottle (So if there is a problem with the pump en route the correct dosage is noted)
- ☐ When pump alarms "no flow above" to signify that the bottle is empty, there is still some tPA left in the tubing which must be infused. Remove the IV tubing connector from the Activase bottle and attach it to a newly spiked bag of 0.9% NS and re-start the infusion. The pump will stop automatically when the preset volume has been infused.
- ☐ Monitor and document vital signs q15 minutes
- ☐ If SBP > 180 or DBP > 105, then

If intravenous antihypertensive medication started at sending facility, adjust as follows:

1. If Labetalol IV drip started at the sending hospital, **increase** by 2mg/min every 10 minutes (to a maximum of 8mg/min) until SBP < 180 and/or DBP < 105. If SBP < 140 or DBP < 80 or HR < 60, turn off drip and call medical control for further instructions.
2. If nicardipine IV drip was started at the sending hospital, may **increase** dose by 2.5mg/hr every 5 minutes to maximum of 15mg/hr until SBP < 180 and DBP < 105; If SBP < 140 or DBP < 80 or HR < 60, turn off drip and call medical control for further instructions.

If no continuous infusion, then give metoprolol - 5mg IV bolus, repeat q5 min for a maximum of 20mgs. Hold if SBP<140 or DBP<80 HR<60

- ☐ For any acute worsening of neurologic condition, or if patient develops severe headache, acute hypertension, nausea, or vomiting (suggestive of intracerebral hemorrhage):
 1. Discontinue tPA infusion (if still being administered)
 2. Call medical control for further instructions including decision to adjust blood pressure medications and/or divert to nearest hospital.
 3. Continue to monitor vital signs and neurological exam q15 minutes
 4. Contact the receiving hospital ED with an update and ETA
- ☐ For all Stroke patients, call CMED with entry note when 10 minutes from the receiving hospital.

LABETALOL

Selective alpha and nonselective beta-adrenergic blocker, weak intrinsic sympathomimetic activity.

Cardiac effects include decreased heart rate, contractile force, and cardiac work load, which reduces myocardial oxygen consumption, enhances coronary artery blood flow, and improves myocardial perfusion. The antihypertensive mechanism of beta blockers is related to decreased cardiac output (negative inotropic and chronotropic effects), reduced adrenergic activity, and inhibition of renin release.

Half life 5-8 hours. Max effect with IV administration seen at about 5 minutes.

Contraindications

- Asthma or COPD
- Cardiogenic shock
- Hypersensitivity to labetalol
- Prolonged or severe hypotension
- Overt cardiac failure
- Second and third degree AV block
- Sinus bradycardia

Serious adverse effects

- Bronchospasm
- Hepatotoxicity
- Hyperkalemia (in renal transplant patients or on hemodialysis. Rare)
- Ventricular arrhythmia
- Allergic reaction

Precautions

- Myocardial depression after surgery/anesthesia
- Avoid abrupt withdrawal (rebound)
- Bronchospastic disease
- CHF
- Diabetes
- Hyperthyroidism
- Ischemic heart disease
- Liver disease
- Peripheral vascular disease
- Pheochromocytoma (paradoxical hypertension)
- Postural hypotension

No dose adjustment required for renal failure

Lower doses required for hepatic insufficiency due to first pass metabolism

Lower doses may be required for elderly patients

Pregnancy class C

OK for breastfeeding

NICARDIPINE

Calcium channel blocker resulting in coronary and peripheral vasodilatation, often with a compensatory elevation in heart rate. It increases the cardiac index and cardiac output while reducing the systemic vascular resistance. There are no antiarrhythmic effects.
Metabolized by the liver.

Peak response in about 2 minutes. Half life 44-107 minutes for a single IV dose.

Contraindications

- Advanced aortic stenosis
- Asphyxia (neonates)
- Hypersensitivity to calcium channel antagonists

Adverse reactions

- Arteriolar dilator with peripheral effects (edema, flushing, reflex tachycardia or palpitations, usually transient)
- Prolonged PR interval or bundle branch blocks
- Flushing
- Tinnitus
- Acute pulmonary edema

Precautions

- CHF
- Exacerbation of angina during initial therapy, with dose increases, or during β blocker withdrawal
- Hepatic or renal impairment
- Persistent dermatologic reaction progressing to erythema multiforme or exfoliative dermatitis
- Pheochromocytoma
- Portal hypertension
- Symptomatic hypotension

No dose adjustment required for renal failure

Pregnancy class C

Inadequate information for breast feeding